

Wyoming Department of Agriculture

Specialty Crop Block Grant Program – Farm Bill

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ONLINE MARKETING OPPORTUNITIES FOR WYOMING PRODUCERS

PROJECT SUMMARY

The overall goal of this project was to identify and promote opportunities for Wyoming producers to market products to local consumers via a direct online marketing network. The project was motivated by several challenges rural producers face: limited marketing opportunities for market gardeners and specialty crop producers and processors; the distance to potential markets; the lack of a distribution system for produce; and the growing desire of consumers to purchase directly from producers. Even as consumer demand for products with special attributes such as organic, natural, and locally grown increases, consumer access to rural producers remains limited to the seasonal farmers markets and roadside stands. In order to address these issues a web based marketing venue was researched and established to promote and sell Wyoming agricultural products. Consumers were surveyed on their needs and a marketing campaign developed to link consumers to the website. Training was provided to producers for online presentation and website use. Finally a distribution channel was developed for product delivery and analyzed for long term sustainability. This was a pilot project focused on southeast Wyoming to demonstrate the feasibility of online marketing statewide.

The specific objectives included:

- Develop and administer a survey of consumer preferences for local produce and processed foods
- Recruit producers for online marketing website
- Establish and maintain a web-based market to promote and sell locally produced fruits, vegetables, and processed products
- Develop a training module for producers for website usage and online presentation
- Develop a marketing campaign to drive consumers to the website
- Develop a distribution system for product delivery and analyze for long term sustainability

PROJECT APPROACH

The project approach was to establish an online farmers market in the counties of Goshen, Laramie and Platte (Albany was later included in the online farmers market). At the start of the project it was determined to follow the approach successful online farmers markets in OK, CO and NE were using. This includes open source software and a distribution system largely relying on volunteers from within each market trade area. After determining sufficient producer and

consumer interest by surveys, both written and oral, we initiated a pilot online farmers market called *Triple Crown Commodities Cooperative (TCCC)*. This entity and its accompanying website developed producer standards and training, operating policies, financial management and record keeping. The operations we patterned TCCC after were structured as cooperatives with both producer and consumer members. We started business with our first monthly order cycle in December 2010. To date we have had 25 order cycles with TCCC becoming a stand-alone incorporated cooperative in September 2012. While meat products were included in the offerings on the online farmers market, no grant monies were expended specifically for these products or their marketing. Any expense incurred in these areas was covered by project partners, the Rocky Mountain Farmers Union Cooperative Development Center and Wyoming Business Council Agri-business Division. Scott Zimmerman, RMFU Cooperative Development Center, and Kim Porter, Wyoming Business Council Agri-business Division, committed many more hours and accompanying salary than was required to meet the grant match percentage. Scott committed 450 billable hours vs. the 200 hours required and Kim committed 757 hours vs. the 150 hours required. Both Kim and Scott donated additional hours of their own time to ensure the success of TCCC.

GOALS AND OUTCOMES ACHIEVED

- In regards to the goal associated with the development of a marketing campaign to steer consumers to the website. Could you provide the number of visitors on the website and number of customers who signed up to buy produce/value added specialty crops? This was a performance measure in the project's proposal.

Goal: Develop and administer a survey of consumer preferences for local produce and processed foods.

Outcome: A survey was developed to provide information that will allow producers to better understand what the consumer is looking for on a local basis. The survey was distributed at farmers markets and other venues in the area of the proposed pilot project. The information was then shared with producers that have been recruited or have shown an interest in marketing local as an indicator for future production decisions.

Goal: Recruit producers for online marketing website.

Outcome: A core group of diverse producers were recruited to form an advisory committee that advised and assisted in managing the project. Recruiting began in September 2009 for vendors to participate on the website. We anticipated 20 to 30 participants as an initial group. As the market developed, the number of participating producers has continued to grow so that we currently have 40 listed producers. Seventeen offer value added Ag products and 16 produce specialty crops.

Goal: Establish a website to promote and sell multiple producers' fruits, vegetables and specialty crop processed products.

Outcome: An online storefront, Triple Crown Commodities Cooperative, for local food products was developed through the RMFU Cooperative Development Center. This website was modeled after other successful direct marketing websites RMFU has assisted. Work on the site started in early spring of 2010, with the site up and running in December 2010, with monthly order cycles continuing. Sales have grown steadily to our current average of around \$2100/ month. A contractor was utilized to provide software support.

Goal: Develop a training module for producers for site usage and online presentation.

Outcome: One seminar was organized by the advisory committee to train producers on website management and web marketing strategies. In addition, a training manual in both a printed and online version was completed in November 2010 and producer trainings began in December 2010 in Goshen County. More training sessions were held in the spring of 2011 in all counties involved. Training included 10 people in Wheatland, 18 Torrington, 31 Bridgeport NE, 27 Scotts Bluff, and 15 through an online webinar. Not all producers attending became members. This will be an on-going effort as more producers become interested in joining.

Goal: Develop a marketing campaign to steer consumers to the website.

Outcome: This goal was initiated with the online market startup in December 2010. The campaign included word of mouth, brochures and media interviews. We had 406 members at the end of the grant period. Efforts in marketing to expand the existing consumer base will continue to be an on-going effort. We have been cautious not to out-step our specialty crop and value added products supply.

Goal: Develop a distribution channel for product delivery and analyze for long term sustainability.

Outcome: The advisory committee attempted to contract with a local produce distributor to facilitate product pickup and delivery. But due to the delivery timings and the locations of our pickup sites, this was not feasible. At this time, the producers are taking their products to Cheyenne, Laramie and



Torrington; volunteers then transfer products from these towns to Wheatland, in Platte County, for sorting, and then our volunteers take the products back to their counties for pickup. This is similar to how other online food coops are working now, but we hope to put into



place a more efficient delivery system. To date we have had few glitches and consumer satisfaction seems quite high. We purchased a small trailer to use on a seasonal basis for delivery. We hope to convert it to a refrigerated unit in the future.

The following table tracks average daily and the total monthly hits to the website from March to November. Total visits were 45,705 with 497,303 hits.

Summary by Month												
Month	Daily Avg				Monthly Totals							
	Hits	Files	Pages	Visits	Sites	kB F	kB In	kB Out	Visits	Pages	Files	Hits
Dec 2012	1513	1373	1124	187	1330	1242109	0	0	5807	34870	42568	46931
Nov 2012	1527	1359	1097	195	1183	1131035	0	0	5871	32918	40778	45834
Oct 2012	1492	1346	1064	176	1184	1023638	0	0	5474	32989	41750	46265
Sep 2012	1304	1206	910	147	1073	838695	0	0	4437	27304	36202	39142
Aug 2012	1541	1440	1079	154	1032	999728	0	0	4785	33451	44670	47789
Jul 2012	2434	2190	1730	204	1224	1650436	0	0	6326	53644	67890	75464
Jun 2012	2759	2511	1867	222	1337	1787698	1	13	6671	56014	75340	82780
May 2012	1902	1724	1241	161	1209	1172206	0	0	5006	38479	53454	58970
Apr 2012	1435	1317	926	124	1042	829524	0	0	3730	27781	39520	43057
Mar 2012	1387	1259	888	113	1032	798654	0	0	3505	27551	39056	43002

BENEFICIARIES

In the pilot phase of the online farmers market we had over 40 producers sign up to list their products and approximately 406 members join to explore and/or order produce and other products. As stated above, TCCC became a stand-alone incorporated cooperative in September 2012. After that time, membership is required to market products through the website. Consumers have the choice of joining or paying a nominal fee per order. The project has helped existing producers diversify their marketing. There is good interest in new member/producers who are contemplating specialty crops as a way of diversifying traditional agricultural crop production. From the consumer standpoint, area consumers are more aware of the variety of crops grown and available in the local region. On a greater platform, the project has sparked interest in several other areas of the state. Exploratory groups have begun looking into the feasibility of similar online markets in other areas of Wyoming. We also are

exploring the possibility of producers of non-perishable products being able to list and sell their products on multiple online markets.

LESSONS LEARNED

One positive lesson we learned is that opportunity exists to market produce locally through an online market. The Wheatland area is a remarkable community for supporting local producers, both through financial support and volunteering to assist with the project. It turned out far and away to be the lead in product sales when you consider population. We were concerned with over-selling the online market and the limited availability of produce for parts of the year so we chose not to advertise extensively in the larger communities of Cheyenne and Laramie. It was refreshing to see the interest mainly generated by word of mouth in both of these communities. The specialty crop grant enabled us to grow slowly and not get overwhelmed. The producers who became involved were very supportive of the project because it provided them with an additional marketing opportunity, while managing their inventory and handling the financial transactions. Additionally, the project provided a means for consumer/producer dialog so consumers felt like they “knew their farmer”. We also learned distribution is a time-consuming challenge but not impossible to overcome. To view site go to <http://triplecrowncommoditiescooperative.com/shop/>



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HIGH TUNNEL CONSTRUCTION AND USE FOR SPECIALTY CROP PRODUCTION

PROJECT SUMMARY

Wyoming is renowned for its short growing season fraught with highly variable and often difficult spring planting conditions as well as the all too frequent possibilities of early killing frosts. These conditions lead to frustrated producers and their inability to tap into the production potential of much of Wyoming’s own food. Fresh vegetable and fruit production in

Wyoming is a challenge. Seasonal temperature fluctuations, wind, and hail all negatively influence production of specialty crops. Wyoming and its residents have benefited greatly from this program designed to educate individuals on how to construct high tunnels and educate producers in their use. In addition to protection from the biotic factors listed above, high tunnels also offer season extension benefits both early and late. These benefits greatly increase the production and *variety* of specialty crops available in the Wyoming food distribution channel. Production of Fresh, locally or regionally grown produce and fruit is being demanded by more of the population. The use of high tunnels allows local producers the opportunity to fill some of this need – at least for an extended portion of the year. High Tunnels/Hoop Houses are passive (no additional energy inputs required) “greenhouses” that have been in use for years in many parts of the world and other areas of the United States. These structures come in a wide variety of shapes and sizes, can be implemented over almost any crop, and will protect the crop from highly variable weather conditions. The greatest road block to implementation is that these structures (when purchased as a kit) can be expensive and intimidating to construct.

This grant allowed for the development and implementation of hands-on educational workshops for Wyoming residents in the how-to construction of high tunnels. These workshops were able to remove factors that can be intimidating in the construction process, encouraged the use of local materials and utilized simple yet sturdy designs that would survive Wyoming’s challenging weather conditions. The initial proposal requested funding to support 8 high tunnel educational workshops in Wyoming and to educate 160 individuals in how to construct these structures.

Goal: Complete four workshops each year for two consecutive years for a total of 8 workshops to educate producers how to construct high tunnels.

Goal: Educate producers in the potential use of high tunnels for specialty crop food production.

PROJECT APPROACH

A request for application was developed and released for statewide distribution. Ten applications were submitted. Selection criteria were based on which build sites and workshops could reach the greatest number of individuals by evaluating the following information provided in the application - public verses private, location, project ownership, & production history. Project owners were notified that their location had been selected for a workshop. Promotional brochures were developed for each location. Project owners organized workshop

participants. Materials were transported to workshop locations. The high tunnel structures were built by participants in a “learn by doing environment”.

GOALS AND OUTCOMES ACHIEVED

Goal: Complete four workshops each year for two consecutive years for a total of 8 workshops to educate producers how to construct High Tunnels.

Between May 2010 and April 2011 (the period of 0% to 100% utilization of grant funds), over 7500 miles were logged, travelling to locations where 16 independent workshops were conducted and 19 structures were completed in 11 of Wyoming’s 23 counties (48%). These numbers significantly surpass the proposed number of workshops to be conducted in the original grant proposal. A total of 229 individuals participated in the workshops and 12% of the attendees indicated they would build their own high tunnel within 24 months of attending the workshop.

These 19 structures cover a total of 10,748 square feet (equivalent to 25% of an acre). The cost to construct a high tunnel is approximately \$3 per square foot while recent data suggest that the potential gross return is between \$5 and 10 per square foot. These structures if managed and marketed correctly could potentially add between \$53,000 and \$107,000 to Wyoming’s economy (if not through direct sales, then through savings from purchases at the market).

Goal: Educate producers in the potential use of High Tunnels for specialty crop food production.

A conservative estimate is that an additional 500 people have toured, participated in seminars, and discussed these projects with the project leader and project owners since 2010. Using a modified Likert 1-5 evaluation scale (where 1 = Information was of low value and 5 = information was invaluable) the average overall workshop was rated at 4.0. When asked **what will you do as a result of this Workshop?** The answers included: Build another High tunnel; Grow more crops longer; Get a jump start on next spring. **Additional Comments:** “I think the “hoop house Project” is a fantastic way to show Wyomingites that we can grow our own food without the outrageous cost of a commercial hoop house”

BENEFICIARIES

Many individuals have benefited from the high tunnel educational workshops that have been conducted in Wyoming. 229 individuals have attended and participated in the construction of a high tunnel. These workshops last for 6 to 16 hours each, this time frame provides ample

opportunity to not only educate participants on the construction of these structures, but other educational discussions have included: the benefit of extending the growing season; how-to-grow traditional and non-traditional crops (items not usually produced in a traditional Wyoming garden setting); pest control strategies.

The project owners (whether Master Gardeners, University Extension Staff; or individual producers) who manage these structures for demonstration or production of crops for sale via the local markets benefit by providing service to the local communities. There are no organized groups in Wyoming who produce specialty crops. The local economy benefits via on-farm and local market sales. The general public benefits as these structures continue to be used for educational purposes. In Wyoming these structures are utilized to extend both the beginning and end of the growing season – significantly impacting the availability of fresh produce earlier and later into the normal season, these slight changes have influenced the availability of a variety of specialty crops for longer periods of time to the project owners and the general public. Of the workshops completed (Table 1), one structure was placed at a group home for individuals with learning and physical disabilities, two structures were placed at a k-12 school in Pinedale, several were placed in locations where the Master Gardeners are utilizing them as a teaching/learning/and production tools.

Demo Structure - Raffle data: February and July 2010, 19 and 16 tickets, respectively; February 2011, 20 tickets. All tickets were \$25 each. A total of \$1375 was collected. These funds have since been used in support of travel or materials for additional high tunnel educational workshops.

Table 1. Summary of High Tunnel Educational Projects.													
Grant count	Structure Count	Workshop No.	Date	Location	County	Project Summary	WDA HT Grant Usage (Materials)	Other Funding Sources*	participants	Time to construct (single man hour)	Estimated total man hours	Value of Volunteer time @\$18.89/ hour	Farmable Square feet
1	1	1	Feb 2010	Sheridan	Sheridan	Demo Project - Traditional Hoop 12 X 12	NA	Producer ¹	10	6	60	\$1,133.40	144
1	1	2	April 2010	Gillette	Campbell	Traditional Hoop 12 X 32 (Master Garden Community Garden)	\$1,071.40	NA	30	9	270	\$5,100.30	384
	1	3	April 2010	Veteran	Goshen	NMSU Straight sided 16 X 32	NA	Producer	6	16	96	\$1,813.44	544
	1	4	May2010	Torrington	Goshen	Modified NMSU Straight sided 20 X 72 (Master Gardeners)	NA	\$4,470.67	8	50	400	\$7,556.00	1440

						and Communit y Garden)							
1	1	5	May 2010	Afton	Lincoln	NMSU Straight sided 16 X 32 (Group Home for individuals with special needs)	\$1,633.35	NA	1 6	16	256	\$4,835.84	512
	2	6	May 2010	Pinedale	Sublette	2 structures NMSU Straight sided 16 X 32 (School Education Project)	NA	NA	2 5	20	500	\$9,445.00	1024
	3	7	May 2010	Powell	Park	Traditional Hoop 12 X 32; Gothic 17 X32; NMSU Straight sided 16 X 32. UW Research and Extension Farm	NA	\$3,500.00	5 0	36	1800	\$34,002.00	1440
1	1	8	July 2010	Torrington	Goshen	Demo Project - Traditional Hoop 12 X 12	NA	Producer ¹	4	6	24	\$453.36	144
	1	9	July 2010	Thermopoli s	Hot Springs	NMSU Straight sided 16 X 32	NA	Producer	5	16	80	\$1,511.20	512
1	1	10	Aug 2010	Lander	Fremont	NMSU Straight sided 16 X 32; Communit y College Field station Learning Lab	\$1,500.00	NA	1 1	14	154	\$2,909.06	512
1	1	11	Aug 2010	Wheatland	Platte	Gothic Style 17 X 32 (Master Gardeners Communit y Garden)	\$1,250.00	NA	1 2	9	108	\$2,040.12	544
	1	12	Aug 2010	Douglas	Converse	20X51 on State Fairground s	NA	\$3,500.00	1 2	40	480	\$9,067.20	1020
	1	13	Aug 2010	Lingle	Goshen	Modified NMSU Straight sided 24 X72 UW Research and Extension Farm	NA	\$3,500.00	5	24	120	\$2,266.80	1728

	1	14	Sept 2010	Rural Goshen	Goshen	NMSU Straight sided 16 X 32	NA	Producer	4	20	80	\$1,511.20	512
1	1	15	Feb 2011	Powell	Park	Demo Project - Traditional Hoop 12 X 12	NA	Producer ¹	2 5	6	60	\$1,133.40	144
1	1	16	April 2011	Laramie	Albany	Demo Project - Traditional Hoop 12 X 12 (ARK group home for individuals with special needs)	NA	NA	6	25	40	\$755.60	144
8	19	16					\$5,454.75 ²	\$14,970.67	2 2 9	313	4528	\$85,533.92	10,748

*Other Funding Sources: Producer = all costs for workshop including materials are covered by private producers, these projects are a direct result of individuals attending a previous workshop; Producer¹ = Initially materials were purchased using Grant funds – these 12 X 12 structures are constructed in-doors during in-climate weather conditions. Raffle tickets are sold to cover the material cost and structure is raffled at the end of the project. Proceeds are deposited back into the High Tunnel project and used to cover costs of additional high tunnel educational workshops.

²Materials are just a portion of expenses. Grant funding also covered the costs of tools, literature copies, promotional items, and the educator plus one intern mileage, hotel, meals

LESSONS LEARNED

Personal observations suggest that workshops where structures are built on public property have the greatest level of participation (broader audience) – but in certain circumstances and for a variety of reasons are the least utilized structures; whereas, structures and workshops for the private sector have the greatest impact on the project owners as these structures are utilized to their fullest potential. The degree of high tunnel utilization appears to be a matter of vested ownership.

Logistics of these projects can be difficult – ordering and purchasing of supplies in a timely fashion, transporting materials to the worksite. Motivating people to complete the process from start to finish can be a challenge as these projects take a minimum of 9 hours to complete.

However, and of greatest importance is the individuals who do participate generally walk away with the attitude that they did learn, and they had a good time, all while contributing to their community.

An economical, easy to construct, and durable, high tunnel/hoop house with the potential to increase crop diversity and local food production are currently top-of-mind areas of interest for the food producers of Wyoming. Public participation in the workshops and seminars exceeded all expectations. This project encouraged hands-on learning and the opportunity to discuss unexplored methods (by the general public) of crop diversity and production. The *possibility* of building a low cost-high tunnel that provides protection against Wyoming's variable growing conditions and extends the growing season piques the interest of all frustrated backyard and commercial producers of food.

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WY SPECIALTY CROPS AND LOCAL FOODS PROJECT SUPPORTING SUSTAINABLE LIFESTYLES

PROJECT SUMMARY

The overall motivation for this project was to expand the knowledge and consumption of specialty crops grown in Wyoming by enhancing and expanding existing relationships among specialty crop growers/local food producers and consumers in Wyoming. The specific goals to accomplish this are to increase consumers' knowledge about the benefits and availability of specialty crops and locally produced specialty crop foods and to increase their food-safety knowledge and skills related to locally produced foods. Achieving these goals will support lifestyle patterns that are more sustainable in terms of energy use, dietary quality, and local economic stability. The project addressed distinct and critical needs through development, implementation, and evaluation of three components that did not currently exist: a Wyoming-specific local foods guide, local food expos, and a training module for educators to successfully promote specialty crops produced in their communities. Project audiences included specialty crop growers/other local specialty crop food processors in Wyoming, residents who were seeking information about and access to specialty crops producers and processors/, participants in the pilot food expos, and educators who participated in the promotional training. Key partners state-wide expressed support for the project, and project leaders had the knowledge, skills, and commitment to carry out the successful endeavor. Additionally, University of Wyoming and UW's College of Agriculture and Cooperative Extension Service were dedicated to successful project administration, and this project was consistent with current

organizational priorities of UW, the College, and Extension. Ultimately, this project promoted lifestyle patterns that are more sustainable in terms of energy use, dietary quality, and local economic stability.

PROJECT APPROACH

The project achieved its purpose and goals through three components:

1. Development and distribution of the *Wyoming Specialty Crop/Local Foods Guide* (print and electronic versions). This Food Guide will include specialty crop producers, processors, nutrition and food safety resources, recipes for using local foods, factsheets related to local foods in Wyoming, and tips on sustainable living. The Food Guide will be uniquely Wyoming but will draw from several existing examples, including Sheridan Area Local Food Directory[1], The Montana Food Guide[2], and The Northeast Regional Food Guide[3] (see Appendix A for all references).
2. Development and pilot-testing of *Wyoming Specialty Crop/Local Food Expos* in at least two communities
3. Development and implementation of a training module to provide UW Extension educators with the knowledge and skills to successfully promote these local foods.

Guide:

The print and electronic versions of the *Wyoming Local Foods Guide* were developed evaluated by users of the Food Guide and attendees of the two pilot *Wyoming Local Food Expos*. The outcomes assessed included the ease of the Food Guide's use, its completeness, and the degree to which users said it motivates them to apply the Food Guide's information; for example, try a specialty crop, take a food safety step related to a locally produced food, etc.

Initial data collection for the guide involved seeking out multiple existing resources and compiling the specialty crop and local foods entries into our own database. These resources included:

- www.localharvest.org
- Sheridan Area Local Foods Directory
- Wyoming Farmers Marketing Association (www.wyomingfarmersmarkets.org)
- Existing entries in the Wyoming Local Food Network database (<http://uwadmnweb.uwyo.edu/wyominglocalfood/>)
- List of local producers in Western Wyoming provided by Jackson Whole Grocer
- Database of specialty crop growers on file with UW Extension horticulture specialist

Once existing resources were exhausted, we began the process of actively seeking additional sources of specialty crops and local foods. This first required the development of a concise and easily recognizable project name and logo as well as a website

<http://www.wyomingextension.org/eatwyoming/index.asp>

<http://www.wyomingextension.org/eatwyoming/about.asp> and Face book group and fan page

(The Eat Wyoming group page currently has 31 members, while the more recently developed fan page is still under construction.)

Further steps included the development of a promotional postcard and producer submission form. These items were immediately distributed within the University of Wyoming (UW) Cooperative Extension Service (CES) network for distribution to the public. The project team also developed a display for use in public and professional settings, a poster for presentation at professional meetings and PowerPoint presentations to showcase the project at multiple state, regional, and national conferences, including:

- Wyoming Sustainability Summit (April 12-13, Laramie, WY)
- WIN Wyoming all-member get-together (April 21-22), Casper, WY)
- Society for Nutrition Education (SNE) Annual Conference (July 24-27, Reno, NV)
- Poster presented at Local and Regional Food Systems pre-conference
- Wyoming State Fair – in UW College of Agriculture and Natural Resources tent

Project efforts were also highlighted in a full page article in the UW Department of Family and Consumer Sciences (FCS) annual newsletter. Approximately 2500 copies of the newsletter were distributed to alumni, friends, donors, campus administrators, departments, and Extension offices throughout the state at the end of April. In addition, a local foods article highlighting the *Eat Wyoming* project appeared in multiple newspapers across the state.

These efforts resulted in numerous contacts requesting additions and updates to our database of specialty crop and local foods growers. Efforts then focused on fact-checking entries in the database. This included contacting each entry via email, phone, or mail to confirm their contact information and other descriptive text for inclusion with each entry in the guide.

Extensive thought and discussion was centered on the format of both the hard-copy and online Local Foods Guide. Guidance for the hard copy was drawn from a detailed analysis of four existing local food guides and directories. In addition to the food directory, it was determined that the guide would also contain numerous educational sections, including the following titles and topics:

- Why buy local food?
- Glossary of terms
- Herbs – growing and using
- Food safety
- Food preservation
- Food storage
- List of specialty crops
- UW Extension offices
- Wyoming map with county names, major towns
- Index of producers, farmers' markets, community gardens, local food groups, and food events
- Recipes

These educational pieces were completed compiled and organized for submission for editing and graphic design by UW Extension Specialists. These educational pieces also appeared in the

updated version of the online guide. This searchable, database-driven website will be very user-friendly and visually appealing. The design is the product of multiple meetings and discussions with UW CES web/technology specialists, and is based upon many currently existing local foods sites, including:

- South Dakota Local Foods Directory (<http://www.sdlocalfood.org/>)
- Appalachian Sustainable Agriculture Project: Local Food Guide (<http://www.buyappalachian.org/>)
- Buy Fresh Buy Local California (<http://guide.buylocalca.org/>)
- Buy Fresh Buy Local Pennsylvania (<http://www.buylocalpa.org/>)
- Primary data collection was completed in 2010 and this process is detailed in our previous (2010) annual report
- Updates to the data collection process and guide status since that time: All entries were verified via email, phone, or mail. A committee within the Leadership Wyoming program collaborated with us to complete this effort. This group of professionals from across the state was extremely valuable in the verification process. Six of their team members documented over 75 hours dedicated to Eat Wyoming efforts. Rough draft was revised through a formal review process, including internal and external reviewers of the entire guide as well as content-area specialists that reviewed specific sections. Feedback and additional entries collected at our local foods expos was incorporated into the final draft.
- Status of the Wyoming Local Foods Guide (hard copy)
- 1st Edition printed in June 2011 with the help of \$4160 in funds from University of Wyoming
- Cooperative Extension Service and School of Energy Resources. Over 2,000 of the 3,000 copies printed have been distributed across the state. Points of distribution include: extension offices, farmers' markets, conferences, local businesses and chambers of commerce. A pdf copy of the guide has been attached, and hard copies can be made available upon request.
- Status of the Wyoming Local Foods Guide (website – www.wyomingextension.org/eatwyoming)
- Includes all of the content from the print guide plus a searchable up-to-date database with advanced mapping features made available to the public in July 2011 Nearly 200 visits documented from August to September 2011, including visitors from as far away as Australia. The site is increasing in popularity and we continue to utilize client feedback to improve the utility of the database search functions and the usability of the additional reference material.
- Evaluation results:
- Feedback on the website and print guide has been very positive. Client ratings on ease of use, completeness, and relevance were 4.9, 4.3, and 4.8, respectively, on a 5-point scale (5=Excellent). 100% of respondents have indicated they will apply the guide information to purchase local foods listed and prepare/preserve foods in a safe manner. A sampling of the descriptive feedback:

- This is definitely a good way to get information to the public in a way which improves the community's knowledge and ability level - while also encouraging local economic development.
- Great Job! Good reference – Thank You!
- .Great Book.
- This is a wonderful site - hopefully it will get good participation and be well used.

Expos:

Outcomes of pilot community food expos completed to date.

- The pilot community food expos in Pinedale and Sheridan drew over 600 participants. A few of the sessions included:
 - . Beekeeping
 - . Beneficial bugs
 - . Composting for the garden
 - . Farm and garden tours
 - . Food preservation
 - . Hoop house construction
- Networking 'expo' with specialty crop and other local foods producers
- The community food expos were driven by a small planning group of local volunteers, which allowed each event to be tailored specifically to the needs and preferences of the host community. Each expo was heavily supported by local sponsors, with over \$5,000 donated in the form of cash, food, and other goods. This allowed the public to attend for free to learn from the many local, regional, and national speakers.
- Expo evaluations:
- Participant ratings for topics, speakers, and overall expo averaged 4.6/5.0 (5 = very good).
- Comments received were overwhelmingly positive, with many attendees planning on putting their newly gained knowledge and skills to good use. A few of these comments:
 - I will start composting!
 - I'm thinking of trying to work with schools/community to produce/grow veggies. I may put up a hoop house this year.
 - I will incorporate efficiency and renewables into my house plans.
 - I will improve my composting and watch my beneficial insects.
 - I'm going to build a hoop house!
 - I will get involved with trying to get a food co-op started.
 - Great program – please do it again.
- The communities of Pinedale and Sheridan, as well as their respective expo planning committees, are very excited about their community food expos and are planning on making them annual events.
- iv - v. Projected versus actual outcomes of additional community food expos that took place from

- Effective Date of this Grant Agreement to September 30, 2011.
- No additional food expos have taken place as of September 30, 2011.
- The Eat Wyoming Specialty Crops and Local Foods training module took place in Jackson, WY from
- August 29 – September 1, 2011. Sixteen educators from across the state travelled to attend this training.
- Significant funding was also contributed by the University of Wyoming Cooperative Extension Service (\$4385 for speaker fees and training supplies) as well as each educator's respective county (over \$3000 in travel costs). This allowed for the training to expand to include many different specialty crops and local foods topics and speakers. A list of the topics and speakers (detailed agenda available upon request):
- Field to Plate 'Edible Education' by Amanda Archibald Local Foods/Selling to Institutions/Value-Added Opportunities by Brook Gerke
- Eat Wyoming- Community Foods Expos by Jennifer Jacobsen & Kentz Willis
- Back Yard Beginnings by Karla Case & Donna Cuin
- Jackson People's Market- Farmer's Market field trip
- Mountain Meadows Garden & Jackson Hole Community Garden Tours
- Evaluation ratings for topic relevance and speaker effectiveness were overwhelmingly positive, averaging 4.7/5.0 (5 = very good). A participant self-assessment demonstrated a dramatic improvement in knowledge and skills from the pre-program (2.4/5.0) to the post-program (4.2/5.0) assessment. 100% of the post-program evaluation respondents (n=15) indicated an intention to use the training to plan upcoming programs (many in the form of community foods expos). Here are a few comments received from participants (detailed training evaluation available upon request):
- This training was awesome! One of the best I have attended in my Extension career. It
- was very informative and the hands-on cooking was great. I will definitely be using the
- materials and knowledge I gained from this training. Thank You!
- Really great training & opportunities for cross initiative networking. Thanks!
- Everything was relevant and very thought provoking. Also, I like how attainable (this
- type of programming) was presented – it doesn't have to be complex. Two thumbs up!
- Activities performed in the previous year can be organized into the following two categories: local foods expos and local foods guide (hard copy and online).
- Local Foods Expo activities:
- Five local foods events were led/supported by Extension educators
- These events were held April-May in Sheridan, Laramie, Lusk, Wheatland, and Pinedale
- More than \$10,000 in additional funding was contributed to support these expos
- Over six hundred individuals attended the five expos, which ranged from 1-3 days in length and included sessions on bees, composting, growing grapes, growing herbs, food preservation, and much more.
- For greater detail on these events please see the attached document entitled 'Eat WY Expo Impact 2012'

- Local Foods Guide (hard copy and online) activities:
- 3,000 copies of the first edition (hard copy) guide were distributed across the state
- We updated and revised the guide and printed 3,000 copies of the second edition in Spring 2012 (2nd edition pdf is attached)
- Over 2,000 copies of the 2nd edition have been distributed across the state
- Website (www.wyomingextension.org/eatwyoming) was updated to include the latest directory information in addition to food safety, food preservation, and recipes in an easy-to-use format.
- Website has received over 2,000 visits in the last year.

GOALS AND OUTCOMES

The overall motivation for this project was to expand the knowledge and consumption of specialty crops grown in Wyoming by enhancing and expanding existing relationships among specialty crop growers/local food producers and consumers in Wyoming. The specific goals to accomplish this are to increase consumers' knowledge about the benefits and availability of specialty crops and locally produced specialty crop foods and to increase their food-safety knowledge and skills related to locally produced foods

Goal: To increase consumers' knowledge about the benefits and availability of specialty crops and locally produced specialty crop foods and to increase their food-safety knowledge and skills related to locally produced foods that support lifestyle patterns that are more sustainable in terms of energy use, dietary quality, and local economic stability through:

1. Development and distribution of the *Wyoming Specialty Crop/Local Foods Guide* (print and electronic versions). This Food Guide will include specialty crop producers, processors, nutrition and food safety resources, recipes for using local foods, factsheets related to local foods in Wyoming, and tips on sustainable living. The Food Guide will be uniquely Wyoming but will draw from several existing examples, including Sheridan Area Local Food Directory[1], The Montana Food Guide[2], and The Northeast Regional Food Guide[3] (see Appendix A for all references).

Outcome: Local Foods Guide (hard copy and online) activities:

3,000 copies of the first edition (hard copy) guide were distributed across the state
We updated and revised the guide and printed 3,000 copies of the second edition in spring 2012 (2nd edition pdf is attached)

Over 2,000 copies of the 2nd edition have been distributed across the state
Website (www.wyomingextension.org/eatwyoming) has been updated to include the latest directory information in addition to food safety, food preservation, and recipes in an easy-to-use format. Website has received over 2,000 visits in the last year.

2. Development and pilot-testing of *Wyoming Specialty Crop/Local Food Expos* in at least two communities

Outcomes: Local Foods Expo activities:

Five local foods events were led/supported by Extension educators

These events were held April-May in Sheridan, Laramie, Lusk, Wheatland, and Pinedale

More than \$10,000 in additional funding was contributed to support these expos

Over six hundred individuals attended the five expos, which ranged from 1-3 days in length and included sessions on bees, composting, growing grapes, growing herbs, food preservation, and much more.

Eat Wyoming Statewide Local Food Expos, spring 2012

Situation: The Eat Wyoming project, which was started to enhance and expand existing relationships among specialty crop growers and local food producers and consumers in Wyoming, began over two years ago. After successful efforts in producing a local foods guide (1st and 2nd edition print versions as well as an updated online database), piloting two local foods expos and providing a training on organizing and hosting regional local foods expos, the project moved into a statewide effort. Post assessment of the training indicated that the majority of participants intended to host a local foods expo in their area of the state. Funding was provided to those that chose to hold an event. A total of five local foods expos of various styles and collaborations were held this spring of 2012.

Inputs: Spearheaded by the Local Foods & Sustainability Nutrition & Food Safety (NFS) issue team all NFS educators were encouraged to facilitate or collaborate in a local food expo. Funding, through an addition to the Eat Wyoming grant, was available to be divided amongst those that decided to plan an event. Five NFS educators around the state were involved in local food expos. \$2500 was available and divided between five people.

Outputs: Five local food expos were held around the state this spring. Kentz Willis hosted the second annual Local Food Expo in Sheridan, Diane Saenz collaborated with Laramie Local Foods at their yearly local foods event in Laramie, Denise Smith held a local foods expo in collaboration with a high tunnel project in Lusk, Chris Pasley held a local foods expo in Wheatland and Jennifer Jacobsen collaborated with the Sublette Local Food Alliance for the second annual Local Fest in Pinedale. Each event was unique to the community in which it was held, but all centered on the theme of bringing local growers and producers together with local community members, or consumers. Workshops were held on various topics from gardening, raising and butchering backyard chickens, worm composting, food preservation, Dutch oven cooking and much more. Expos were from 1-3 days in length and featured local and nationally known speakers.

Outcomes/Impacts: Based on the evaluations from both participants and producers who attended the five

Statewide local food expos the events both met expectations and were worth the time to attend.

Of participants who were surveyed:

- 98% responded the expo inspired to explore more about Wyoming local food

- 94% responded the expo inspired to think about growing their own garden
- 96% responded the expo helped acquire knowledge and skills to help use local foods
- 93% responded the expo increased knowledge regarding benefits of eating locally produced foods
- 94% responded the expo gave greater understanding of local food vendors and opportunities
- 94% responded the expo introduced local food resources available in Wyoming

Of producers who were surveyed:

- 57% responded the expo allowed them to better promote Wyoming local foods
 - 29% responded the expo broadened the scope of their audience and market
 - 33% responded the expo helped connect them with potential consumers in the state
 - 33% responded the expo helped connect them with other growers and producers in the state
 - 24% responded the expo increased knowledge of specific venues for selling products
- 100% of participants and producers responded that they would recommend a local food expo to friends and colleagues, while 99% responded they would be interested in taking classes in the future related to local foods.

3. Development and implementation of a training module to provide UW Extension educators with the knowledge and skills to successfully promote these local foods.

A training module for UW Extension educators was developed to promote local foods assessed the changes in educators' knowledge and skills to promote specialty crops and other locally processed specialty crop foods and the degree to which they were able to begin planning a Food Expo in their community.

Outputs: The training took place in Jackson from 29 August- 1 September 2011. The grant funding allowed each NFS Educator to invite a partner from their area, whether in Extension or another community member involved in promoting local foods. There were a total of 16 participants and 2 additional outside speakers. All participants took place in the entire training. The training consisted of the following sessions:

Field to Plate 'Edible Education' by Amanda Archibald

Local Foods/Selling to Institutions/Value-Added Opportunities by Brook Gerke

Eat Wyoming- Local Food Expos by Jennifer Jacobsen & Kentz Willis

Back Yard Beginnings by Karla Case & Donna Cuin

Jackson People's Market- Farmer's Market field trip

Mountain Meadows Garden & Jackson Hole Community Garden Tours

Outcomes/Impacts: Based on feedback from pre & post evaluations and single-day evaluations on specific workshops the majority of the participants felt the training was beneficial and an overall positive experience.

From pre- to post-test assessments participants increased their knowledge and/or skills in all of the areas asked, on a scale from 1-5 (1 being very little, 5 being very good).

Using specialty crops and local foods to lead hands-on nutrition lessons:

Pre-Assessment Average – 2.38 Post-Assessment Average- 4.2

Leading local efforts for educational expos highlighting specialty crops and local foods:

Pre-Assessment Average – 2.31 Post-Assessment Average- 4.2

Farm-to-school and value-added opportunities for specialty crop and local foods producers:

Pre-Assessment Average – 2.31 Post-Assessment Average- 3.7

Collaborating with local partners to provide programming focused on growing and preserving specialty crops and local foods:

Pre-Assessment Average – 2.69 Post-Assessment Average- 4.4

A few comments from the evaluations:

“This training was awesome! One of the best I have attended in my Extension career. It was very informative and the hands-on cooking was great. I will definitely be using the materials and knowledge I gained from this training. Thank You!”

“Really great training & opportunities for cross initiative networking. Thanks!”

“Everything was relevant and very thought provoking. Also, I like how attainable (this type of programming) was presented – it doesn’t have to be complex. Two thumbs up!”

What methods were used to evaluate the program?

Pre-assessments questionnaires were taken on Monday before programming began. Each day participants were given a daily assessment based on the offerings for that day. There was also a final assessment taken at the end of the conference encompassing the entire experience.

What were the Impacts?

Short Term 100% of the participants in the training indicated on the evaluation that they plan to offer educational programming based on the content of the Eat Wyoming training. This would serve to enhance local food knowledge and bring together consumers and producers of local food products around the state of Wyoming.

Medium Term Based on the assumption that there will be an increase in local foods education, residents in Wyoming will have an increased awareness of local foods around the state.

Long Term With an increase in awareness of local foods, Wyoming residents will be more likely to purchase and consume local foods. Though not entirely, the majority of local foods offered are unprocessed or minimally processed foods.

BENEFICIARIES

Over twelve hundred individuals attended the seven expos, which ranged from 1-3 days in length. Session topics included bees, composting, growing grapes, growing herbs, food preservation, chickens, farm and garden tours, hoop house construction, and much more. Impacts:

Short Term: Participant ratings for topics, speakers, and overall expo averaged 4.6/5.0 (5 = very good). Comments received were overwhelmingly positive, with many attendees planning on putting their newly gained knowledge and skills to good use.

Medium Term: Improved knowledge, skills, and motivation will help to strengthen the growing market for local foods. Consumers are willing to pay a premium for local products, and local foods expansion is generally thought to have positive economic impacts.

Long Term: Many local food items are fresh or minimally processed, making them positive choices for health. Improving access to these wholesome foods has the potential to improve the health of the local population.

5,000 copies of the food guide have been distributed and over 2,000 individuals have visited the Eat Wyoming website.

LESSONS LEARNED

What methods were used to evaluate the program?

Jennifer Jacobsen has been part of the WECT (Western Evaluation Capacity Training) program, and through this project created an evaluation for both participants and producers that attended the local food expos. These same evaluation questions were used to evaluate all five local food expos around the state.

What were the Impacts?

Short Term the majority of participants have increased their knowledge about local foods in Wyoming and indicated they were inspired to grow and or use them more.

Medium Term based on the assumption that those participants will use and grow more local foods, there will be an increased awareness of local foods around the state of Wyoming and an increase in purchase and sales from local producers. Since the majority of local foods are whole and minimally processed foods, we can assume there will be an increase in whole and minimally processed food consumption around the state of Wyoming.

Long Term based on the assumption that local whole and minimally processed food consumption will increase in Wyoming, we could see a long term increase in health. Eat Wyoming continues to refine its efforts and expand its presence in Wyoming. The expos have proven to be a great tool for reaching audiences and inspiring behavior change. The hard copy guide has served as a great educational tool as well as a great promotional tool for the program. Future efforts will put a greater focus on enhancing our web presence and attracting traffic to our website.

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ASSESSMENT OF FENUGREEK FOR ADAPTION TO SOUTHEAST WYOMING

PROJECT SUMMARY

Fenugreek (*Trigonella foenum-graecum* L.) is a valuable specialty crop in the family of *Fabaceae* which is used both as an herb and as a spice. Our goal was to learn if fenugreek would grow to maturity in South East Wyoming. If this occurs, it should be adapted to other regions around Wyoming as well neighboring states. To accomplish this, we modeled the growth and development of 13 fenugreek genotypes/accessions. These entries came from the United States and Canadian germplasm collections and had been chosen based proximity of origin compared to Wyoming. Specifically, those originating within a similar range of elevation and latitude as South East Wyoming were the first being evaluated. The specific purpose of this study was to evaluate most promising genotypes/accessions of fenugreek under two growing environments in Wyoming for the phenotypic adaptability and stability for growth, seed yield, and quality.

PROJECT APPROACH

To accomplish this objective, seeds of 13 genotypes/accessions (collected from Canada) were sown in replicated experiments during the spring of 2010, 2011, and 2012 at University of Wyoming Research and Extension facilities. One irrigated site was used at the University of Wyoming Research and Extension and Greenhouse facilities in Laramie. At the University of Wyoming Sustainable Agriculture Research and Extension Center near Lingle, Wyoming, two sites were sown. One site was on irrigated and the other was on dryland.

Seeding was conducted onto a clean, firm, and smooth seed bed with four replicates in a randomized complete block design. In the first year, the seeding date for Lingle was on June 1, 2010 and at Laramie, June 2, 2010. In the second year of the study, the seeding date for Lingle was on May 2, 2011 and at Laramie, May 10, 2011. While in the third year of the study, the seeding date for Lingle was on May 14, 2012 and at Laramie, May 17, 2012. The sowing rates were 25 lb PLS (pure live seed) per acre. Unit plot size was 5' × 15'. The experimental plots were divided into two duplicate groups, one group for vegetative production and the other for seed production. Weed control, irrigation (irrigated plots), fertilizer application, and other management were performed as and when necessary during the establishment period. Developmental information (e.g., emergence, shoot elongation date, flower initiation date, plant height at flowering, and seed maturity date) were recorded in June, July, and August in 2010, 2011 and 2012. For vegetative yield, plots were mechanically harvested at Lingle on August 31, 2010, August 15, 2011, and July 31, 2012 and at Laramie on September 3, 2010, August 23, 2011, and September 5, 2012 using a harvester. Plots for seed production in both locations were sprayed with roundup in mid-September (2010), mid-August (2011), and mid-

September (2012) to desiccate the plants aiming to obtain uniform seed maturity. The seeds were harvested using a combine in mid-October, 2010 (both locations); in late August, 2011 at Lingle, in early October, 2011 at Laramie; and in mid-October, 2012 at both Lingle and Laramie.

GOALS AND OUTCOMES

Goal: Fenugreek (*Trigonella foenum-graecum* L.) is a valuable specialty crop in the family of *Fabaceae* which is used both as an herb and as a spice. Our goal was to learn if fenugreek would grow to maturity in South East Wyoming. The specific purpose of this study was to evaluate most promising genotypes/accessions of fenugreek under two growing environments in Wyoming for the phenotypic adaptability and stability for growth, seed yield, and quality. If this occurs, it could then be adapted to other regions around Wyoming as well neighboring states.

Outcome: Several lines of fenugreek performed well both in irrigated and dryland conditions however, it appears that line F96 is one of the best lines that performs very well for DM and seed yields under irrigated and dryland conditions at both locations. It is expected that selection of well-adapted high performing fenugreek genotypes/accessions will result in development of cultivars that will be specifically suitable for Wyoming and neighboring states.

Table 1. Dry matter (DM) yield of fenugreek variety/line under irrigated and dryland conditions at Lingle and Laramie in 2010 and 2011.

Variety/	Lingle				Laramie	
Line	Irrigated		Dryland		Irrigated	
	2010	2011	2010	2011	2010	2011
	-----DM lb/A-----					
Amber	1274	7225	308	1316	966	2191
F17	1346	7357	518	1316	1250	1786
F70	1345	9532	304	1538	293	1862
F75	1381	5191	562	1477	597	1677
F80	2127	6228	331	1275	618	2214
F86	1549	6242	310	1579	398	2162
F96	1614	6058	665	1234	1381	2605
IT	945	6695	735	1518	621	2188
L3068	1042	5951	335	2085	161	2232
LRC3375	1499	7275	457	1498	1140	2669
LRC3708	1632	7108	411	1336	904	2673
Tristar	1367	7665	263	1761	839	2223
X92	1295	7630	447	1376	826	2142
LSD(0.05)	1004	4246	325	695	634	941

Table 2. Seed yield of fenugreek variety/line under irrigated and dryland conditions at Lingle and Laramie in 2010 and 2011.

Variety/	Lingle				Laramie	
Line	Irrigated		Dryland		Irrigated	
	2010	2011	2010	2011	2010	2011
	-----Seed yield lb/A-----					

Amber	753	640	78	410	22	768
F17	1478	1384	126	182	60	1048
F70	903	1007	55	352	88	577
F75	1355	921	179	252	191	805
F80	1038	864	97	365	104	595
F86	1062	1612	146	364	166	1051
F96	2008	1397	345	156	309	1166
IT	728	951	127	118	253	898
L3068	812	1771	164	57	46	980
LRC3375	1340	1384	199	278	517	919
LRC3708	1297	1328	135	246	370	394
Tristar	1169	485	170	471	199	1145
X92	1093	1416	176	177	134	842
LSD(0.05)	402	759	245	81	319	309

Several presentations and publications have been made including field days bulletins which went directly to producers and stakeholder listed below. Additionally, journal article will be submitted in near future.

Islam, M.A., Krall, J.M., Cecil, W.K., Nachtman, J.J., Baumgartner, R.E., Bandara, M., and Acharya, S. 2012. Fenugreek: A potential legume for multipurpose use. Proceedings of the 6th International Crop Science Congress, August 6-10, 2012. Bento Goncalves, RS, Brazil (International Crop Science Congress).

Islam, M.A., Krall, J.M., Nachtman, J.J., and Baumgartner, R.E. 2011. Assessment of fenugreek for adaptation to southeast Wyoming. Proceedings of the American Forage and Grassland Council Annual Conference, June 12-15, 2011. French Lick, IN (American Forage and Grassland Council).

Islam, M.A., Krall, J.M., and Nachtman J.J. 2011. UW study evaluates fenugreek as new alternative forage legume in Wyoming. *Barnyards & Backyards*, UW Cooperative Extension Service, March 2011, p. 10.

Islam, M.A., Krall, J.M., Cecil, W.K., Nachtman, J.J., and Baumgartner, R.E. 2012. Assessment of Fenugreek for Adaptation to Southeast Wyoming. 2012 Field Days Bulletin, University of Wyoming Agricultural Experiment Station, pp. 57-58. Available at <http://www.uwyo.edu/uwexpstn/files/docs/2012-field-days-bulletin.pdf> (verified November 14, 2012).

Islam, M.A., Krall, J.M., Cecil, J.T., Nachtman, J.J., and Baumgartner, R.E. 2011. Assessment of fenugreek for adaptation to Southeast Wyoming. 2011 Field Days Bulletin, University of Wyoming Agricultural Experiment Station, pp. 75-76. Available at <http://www.uwyo.edu/uwexpstn/files/docs/field%20days%20bulletin%202011.pdf> (verified December 24, 2011).

Islam, M.A., Krall, J.M., Nachtman, J.J., and Baumgartner, R.E., Bandara, M., and Acharya, S.N. 2011. Evaluation of fenugreek for forage and seed yield potential in Wyoming. Proceedings of the ASA-CSSA-SSSA International Annual Meetings October 16-19 2011. San Antonio, TX (American Society of Agronomy, Crop Science Society of America, Soil Science Society of America).

Islam, M.A., Krall, J.M., Nachtman, J.J., and Baumgartner, R.E. 2011. Assessment of fenugreek for adaptation to Southeast Wyoming. Proceedings of the American Forage and Grassland Council Annual Conference 12-15 June 2011. French Lick, IN (American Forage and Grassland Council).

Islam, M.A., Krall, J.M., Nachtman, J.J., Baumgartner, R.E., and Bandara, M. 2011. Assessment of fenugreek: A new specialty crop. Proceedings of the Japan Society for the Promotion of Science-US Alumni Association Multidisciplinary Science Forum International Annual Meetings 11-12 March 2011. Seattle, WA. (US Japan Society for the Promotion of Science).

Islam, M.A. 2012. Fenugreek in semiarid environment. “Tear Down the Walls” Annual Meeting, August 15-16, 2012, James C. Hageman Sustainable Agriculture Research and Extension Center (SAREC), University of Wyoming, WY.

Islam, M.A. 2011. Fenugreek: What is it? Can we grow it in Wyoming? UW Department of Plant Sciences Seminar Series, 21 October 2011, Department of Plant Sciences, University of Wyoming.

Islam, M.A., Krall, J.M., Nachtman, J.J., and Baumgartner, R.E., Bandara, M., and Acharya, S.N. 2011. Evaluation of fenugreek for forage and seed yield potential in Wyoming. ASA-CSSA-SSSA International Annual Meetings October 16-19 2011. San Antonio, TX (American Society of Agronomy, Crop Science Society of America, Soil Science Society of America).

Islam, M.A., Krall, J.M., Nachtman, J.J., Baumgartner, R.E., and Bandara, M. 2011. Assessment of fenugreek: A new specialty crop. Japan Society for the Promotion of Science-US Alumni Association Multidisciplinary Science Forum International Annual Meetings 11-12 March 2011. Seattle, WA.

BENEFICIARIES

Project benefits and beneficiaries numbered in the hundreds. Producers, extension educators, students, stakeholders, and scientists would have received benefits from the results of the study. Study results have been demonstrated in the field days attended by 205 local producers and agricultural professionals, scientific meetings (nationally and internationally), and classroom teaching at the University of Wyoming. Producers’ benefits are obvious. For example, producers, especially organic growers, want crops that subsist by producing biological nitrogen. This makes fenugreek a potential option for the several dozen organic producers within the South East Wyoming regions. In addition, countless health conscious consumers of fenugreek greens and seed would benefit from local production delivered into the South East Wyoming and Front Range market. Perhaps a larger volume market however is the forage stock feed market as the fenugreek cut for hay may substitute alfalfa for those looking for a one year or short rotational forage crop. Additionally, the results will be very useful for plant breeders to develop new cultivars using best traits identified in the study.

LESSONS LEARNED

Data is continuing to be processed and analyzed, however dry matter (DM) data showed promising and interesting results for some of the lines (Table 1). For example, at Lingle, line F80 produced the highest DM yield (2127 lb/A) while line IT produced the lowest DM yield (945 lb/A) under irrigated condition in 2010. In contrast, line IT produced the highest DM yield (735

lb/A) in dryland conditions in 2010. On the other hand, in 2011, DM yields increased 3-7 fold under irrigated (range 5191-9532 lb/A) and 2-7 fold under dryland (range 1234-2085 lb/A) conditions, compared to the DM yields of 2010. The highest yield was 9532 lb/A (line F70) under irrigated and 2085 lb/A (line L3068) under dryland conditions. The reason for greater DM yields in 2011 was due to earlier planting date and longer growing period in 2011 (early May planting; 15 wk growing period) than in 2010 (early June planting; 13 wk growing period). In general, irrigated plots produced higher DM yield than dryland plots. Dry matter yield variations were also observed in Laramie site under irrigated conditions (Table 1) with the highest yield (1381 lb/A) from line F96 in 2010 and 2673 lb/A from line LRC3708 in 2011. Similarly, large variations were also observed for seed yield under irrigated (range 728-2008 lb/A in 2010; 485-1771 lb/A in 2011) and dryland (range 55-345 lb/A in 2010; 57-471 lb/A in 2011) conditions at Lingle and under irrigated conditions at Laramie (range 22-517 lb/A in 2010; 394-1166 lb/A in 2011) (Table 2). Greater seed yields were associated with irrigated plots than dryland plots. The highest seed yield (2008 lb/A) was obtained from line F96 under irrigation at Lingle in 2010. On two years average, line F96 was the highest seed producing line under irrigation (Table 2). In 2012, although samples, seeds, and data are in the final process, similar trend of traits is expected following visual and initial data observation.

This three years study warrants future multi-locations and regional evaluation to confirm the obtained traits in this study and develop new cultivars of fenugreek for Wyoming and states beyond Wyoming. Funding will be sought for future studies.

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SMALL GRANT PROGRAM FOR SMALL FARM CROP IMPROVEMENTS

PROJECT SUMMARY

Small Grant Program for Specialty Crop Improvement

Through previous USDA specialty crop grants, Wyoming has offered small grants to producers to develop and promote methods for season extension/increased crop productivity and native seed production. The program has been incredibly successful and has been deemed as “the most productive way Wyoming can enhance the specialty crop program in the state.” Since the inception of the program 26 grants had been awarded for high tunnels and irrigation systems. Numerous high tunnel workshops had been facilitated in several areas around the state and a course held at the Wyoming State Fair in 2009. The results of these high tunnels built in Wyoming have been longer growing seasons, increased quality and quantity of product. The tunnels are being built to withstand Wyoming wind, temperature and hail. The results have saved produce and also reduced water use. This funding opportunity added to a project submitted by Cooperative Extension (high tunnel workshops) by providing a grant opportunity to participants of those workshops. The Wyoming Department of Agriculture in partnership with Wyoming Community Network continued and expanded the small grants program for agricultural producers and nonprofit organizations. Small grants were awarded to farmer growers to develop methods for season extension/increased crop productivity and native seed production and to nonprofits for educational and research purposes.

PROJECT APPROACH

This project allowed small grants (not to exceed \$3,500) to be awarded to producers and agriculture organizations for specialty crop season extension activities. Grants included high tunnel construction, irrigation methods, other season extension techniques, and the development of native seed production. Eight grants were awarded. This small grant program enhanced the grant proposal by Cooperative Extension to conduct high tunnel workshops. This program was able to offer a grant opportunity to workshop participants who were qualified producers or non profits. The original grant application process, rules and reimbursement process were developed in the fall of 2007 and were updated to reflect nonprofit eligibility. Grants were awarded on a competitive beginning in 2010. Application process included submitting an application, budget, and letter of support from a local entity that could vouch for an applicant’s involvement in agriculture production. Applications were reviewed by the

Wyoming Department of Agriculture and successful applicants notified by the Wyoming Community Network. Marketing efforts included high tunnel workshops, articles in local newspapers, and University magazines and on the WDA website. Brochures on the program were updated and distributed at various trade events.

GOALS AND OUTCOMES ACHIEVED

Overall Goal: Because of Wyoming short growing season and high altitude many growers have limited production cycle reducing their ability to produce and market during prime farmers' market season. Small grants will be awarded to grower and nonprofit organizations to develop and promote methods for season extension/increased productivity and native seed production. As a result, we saw season extensions, increased production, and educational opportunities. We increased the marketing efforts by distributing brochures at a University Sustainability Conference, Local Foods Group gathering, the 2010 Farmers Market Conference, and through the Master Gardeners program. A high tunnel photo article of how to build a high tunnel was published in the January of 2010 Barnyards and Backyards magazine and how to manuals for hoop house and gothic style high tunnels were distributed at conferences and trade events.

The following are grants awarded and projects completed The grants applications were received from various locations around the State for season extension projects

Project 1: Western Plains Vineyard

Goals: The project is to build a high tunnel to expand the growing season. The high tunnel will extend the growing season and allow us to grow more produce, both in quantity and variety. The high tunnel will assist us in our goal to expand our market garden and offer more produce to our current customers and also more CSA shares.

Outcome: We built three 12x32 high tunnels instead of one to help with crop rotation with the help of five family members.

The new hoop houses allowed us to begin planting cool weather crops in March and extended our growing season until the end of October. We built three hoop houses in the spring of 2010.

In 2010 we fulfilled a five share CSA, serving customers into September. In 2012, we utilized Triple Crown Commodities Cooperative, an on-line farmers market, to sell our vegetables. The hoop houses enabled us to have a better crop for a longer period of time, which enabled us serve more people fresh, local food.



Impact: We hosted over 100 people at an open house in August of 2012 to showcase the hoop house and crops inside. Many people were unfamiliar with this new idea and it spurred great interest. In 2011 we fulfilled a ten share CSA and were able to serve customers into November. We also hosted many people visiting our operation. Most of those were from phone calls from people we didn't know and we had visitors from as far away as Wheatland, WY.

Project 2: Mathis Ranch

Goals: The purpose of the project is to expand our growing season enabling us to grow more produce reduce water usage and allow us to provide more food for our family and an opportunity to profit by selling our produce at farmers market. We will be able to grow a more diverse variety of crops because the tunnel will help provide a more favorable growing environment for crops such as strawberries raspberries and vegetables such as tomatoes cucumbers and melons we hope to expand our ability to produce locally grown low pesticide healthy food.

Outcome: A high tunnel was built and we were able to provide a limited amount of specialty crop to the local farmers market. The soil on the ranch is very basic and we are continuing to try and amend it in the high tunnel to be more acidic so that raspberries and blueberries will grow better.

Impact: We are a 2000 acre cattle ranch and this is a way to diversify our operation. We have yet to be able to achieve the level of specialty crop production needed to satisfy the demand at the local farmers market but are hoping to increase berry production this year. Two of our neighbors are considering constructing a hoop house after visiting with us regarding ours. The local school in Wheatland is planning on erecting a hoop house this spring and we will be consulting with them on the construction and use of hoop houses.

Project 3: Hanna Elementary School

Goals: The purpose of this request is to develop a greenhouse project at the Hanna Elementary School, with the objective of using and teaching student's science through hands on, inquiry based activities. The high tunnel will be an educational resource tool to help with our objective. Students will learn earth science combined with interdisciplinary subjects in a comprehensive and interesting curriculum. The discipline of gardening will help students incorporate entrepreneurship; help them realize small acreage plots and increase their understanding of urban land use and how its residents can benefit from alternative practices. The high tunnel project at the Hanna Elementary School will serve as a protected open lab area where students and volunteers can be educated in earth sciences and other related disciplines. Hands on activities will allow educators to teach life cycles, ecosystems, conservation practices, nutrition, entrepreneurship and knowledge of environments and the world around them. Studies have shown that school age children benefit from programs like the high tunnel project



through increased student scores and sociability. The visibility of this project will promote a connection with parents and the greater community, in connection with the school. As urban and rural life has changed, children rarely have the chance to actually garden. Wyoming communities have the added challenge of adverse weather, short growing seasons, and windy conditions. Exposure to fresh garden produce promotes nutritional values and can lead to healthy life-long eating habits. We hope to spark an interest that can lead to careers in horticulture and other agriculture related positions.

Outcome: All the objectives have been met through the purchase and erection of the greenhouse. The structure continues to be used as a learning tool for several grades in the school and for the summer students.

Impact: The northern towns of Carbon County School District #2 encompass three elementary schools and a high school. The community of Hanna and surrounding areas has an estimated population of 800 people. The students in the first grade classroom became meteorologists. They recorded temperature comparisons of inside (greenhouse) and outside temperatures, built anemometers to check wind speed, and looked at the sky. This helped them predict what they may record. They got very good at their predictions. They were able to remember that plants need air, water, heat, and light to grow. Conversely, fifth grade students grew three different flowers. They determined and recorded how long it would take for the plants to sprout and compared the view of a new sprout with that of others to determine what plant they had. Students followed the seed growth by drawing pictures and labeling them. They were required to transplant their plants which generated a lot of discussion about the importance of caring for the roots, how high the stem should be covered, how to prevent over watering, and location of transplanting, when and how it will you know it's time to plant outdoors. They also did a math activity that had them determine how much they could grow in a raised bed with proper spacing and then converted their findings to a larger plot. Mrs. Marich led the fifth grade students in their investigation as well as several of the investigations with the first grade class; along with their classroom teacher. The goals were obtained by students asking questions which lead to further scientific investigations. The students were able to take their planting home, to add to a garden or continue growing. The hoop house also kept the deer out!



Project 4: 8H Ranch

Goals: The purpose of the project is to provide local fresh produce and bedding plants adapted to the Farson area climate timed for outdoor planting for the local market.

Outcome: We were able to construct the hoop house and estimate that we are able to get a month of extra growing time on each end of the season. This year we added a heater to stretch the season a little more. Five neighbors helped



construct the hoop house.

Impact: During the first year we had over 40 visitors wanting to look at the structure and how we built it. This year we have approximately 60 people coming to the ranch on a regular basis to purchase locally grown vegetables. There are several individuals in the valley who are considering building a smaller hoop house as well. The local Farson School just recently put up a hoop house for the students to incorporate into their curriculum. This hoop house was built through a workshop supported by the specialty crop program.

Project 5: Garden Gate Farms

Goals: The purpose of this project is first; increase the success rate of potted and planted shrubs, vines and vegetable plants. Second, increase the production for consumption and storage. Third, utilize developed systems such as farmers markets and online markets for selling produce and fruit. The harsh winters, frosts and hail have devastated fruit and vegetable production. Considerable amounts of time, money, and mature crops are lost due to the inclement weather. The salvageable fruits and vegetables historically are merely enough for single meals, with no ability to can and store.

Outcome: A 12x50 hoop was constructed in the spring of 2011 with the help five neighbors. Water usage has been reduced by approximately 50%. We are now able to grow edemame, beans, okra, grapes, strawberries (birds would eat them) and tomatoes. Before having the hoop house most years the vegetables would be lost to early frost. It is now possible to leave root crops in the ground well into the winter and harvest as needed.

Impact: The level of interest in hoop houses in the area has increased. Although we have had numerous neighbors stop by only two neighbors have expressed serious interest in building a hoop house and requested information on the hoop house grants and method of construction. I was able to provide technical support for another producer built a structure based on the design we built. Overall we were able to mitigate the impacts from hail, early and late frost as well as damage from grasshoppers, ground squirrels and rabbit. Unlike previous years when there was not enough produce this summer we were able to supply approximately 15 people with various vegetables and are pursued the idea of selling greens to the local school lunch program. I am also consulting with Coop Extension agent in Western Wyoming on a hoop houses project that they plan on constructing in 2013 that will be used for 4H projects.



Project 6: Happy Jack Harvest Farm

Goals: PROJECT PURPOSE AND GOAL: Because of the wind damage to our first tunnel we had discussed construction of a “wind fence”, but after costing out such a structure, we decided to try construction a slightly lower high tunnel in the same location to serve the dual purpose of reducing wind load and adding growing area. The addition of a second high tunnel would nearly double our extended season production area. That would in turn, allow more efficient use of proven practices such as crop rotation and fallowing. More area also allows more latitude in

planning subsequent plantings.

At present, the available planting area allows a specialty crop operation which is “marginal” at best, we have accepted this because we have enjoyed the evolution, and the learning Process.

Outcome: Due to the late completion, we are concentrating on soil building practices this fall/winter in preparation for spring planting. The availability of the additional space allows us to dedicate some space for the students. We have been active in the Jr. Master Gardener program. I am on the county board and help teach the program at Gilchrist School. We have offered the use of our facility the help in that program. When we erected our first tunnel we sponsored a “barn raisin’ party”, nearly 100 interested people attended. We will sponsor such an event again. Also, there has been considerable curiosity about our wind loss and our decision to rebuild and add to our operation will certainly increase awareness in the viability of this method of specialty crop production. I am available frequently to show our facility to interested parties and share my experiences with these techniques freely. There has been a fair amount of speculation about our wind loss, and our ability to discover the cause and “cure” the problem. The addition of the second high tunnel will certainly be highly visible, and carefully watched by a significant portion of our community.



Impact: I have presented lessons learned from this project to the Laramie County Master Gardeners, The Jr. Master Gardener educators at the Children’s Village at the Cheyenne Botanic Gardens, several other high tunnel operators and a significant number of other interested parties. Interested parties have visited and or helped in the construction of our tunnels a number of times; with a total of well over 300 man hours of volunteer participation.

Project 7: Garland Cattle Company

Goals: Our goal is to raise a very high quality vegetable crop in order to market locally at the Farmer’s Market. The absolute highest degree of quality that we seek is extremely difficult to obtain without the use of a structure such as a high tunnel. This spring we had a late frost that seriously injured trees and unprotected crops. A high tunnel would have protected all of our fruits and vegetables grown within it. A high tunnel will allow our crops to be ready a full month earlier than our competition, not to mention a superior, all natural product at that! In addition, our crop would continue a full month later into the season. This will firmly plant our business as one that can be soundly counted on to deliver locally grown, ultra-high quality produce in abundant enough supply hope to pique the interest of local restaurants interested in featuring excellence.



Outcomes: The high tunnel 26x50 was constructed and we are able to produce the superior product that is so highly sought after in our local market due to having a more controlled

environment. This project has significantly increased production. The high tunnel has allowed us to extend our growing season by approximately two months per year and conserve irrigation water.

Impact: Once the project was complete we hosted a farm day for 13 individuals to come and tour our farm. It was educational for both the urban people who are not as well informed about agriculture as well as other farm people who are interested in different ways of operating.

Project 8: Wyoming Farmers Marketing Association Freemont County Fair Grounds

Goals: Central Wyoming's weather makes it challenging to grow wind and cold sensitive specialty crops. The demand for locally produced high quality specialty crops fruits and vegetables is increasing. High tunnels have the ability to increase the growing season for specialty crops by approximately 60 days. The purpose of this grant is to educate the public on the use of high tunnels in Wyoming for the



production of high quality, locally grown specialty crops. Attendees at the Fremont County Fair will be able to see that it is possible to produce specialty crops in these areas and other weather challenged areas around the State. A second structure of similar dimensions will be constructed at the Wyoming State Fair to add a third style of hoop house to the grounds.

Outcomes: A 15 x 36 hoop house based on a modified design of the New Mexico style hoop house (See attachment) was constructed during the Wyoming Farmers Marketing Conference. Fifteen producers, master gardeners and interested individuals were able to have hands on experience in constructing the structure. The Riverton Master Gardeners plan to use the high tunnel to start and grow plants next year to promote increased knowledge of horticulture during fair time

Impact: Over and above increasing the knowledge of 15 people who helped build the high tunnel, the Fremont County fair attracts 25,000 people to the fair

Overall outcome: Eight grants were awarded. Farmers Market managers surveyed indicate that approximately 50% market vendors have some produce or processed specialty crop product. During winter market the amount of processed product (jams, jellies etc), root crops and squashes increased while tomatoes, cucumbers and other light and weather sensitive crops decreased. Based on the last specialty crop census the number of producers directly impacted by the grants were approximately 2.4%

BENEFICIARIES

The benefits of this program are broad based have been substantial to the overall specialty crop program goals for Wyoming. We continue to see growing interest in the program spurring more trainings, increased growing seasons resulting in expansion of farmer markets this year and increasing number of winter markets, and generation of positive press. The producer and nonprofit small grant program continues to be the most highly visible of the Specialty Crop Programs. The NRCS high tunnel grant program continues to be a compliment to the specialty crop program for some producers. The expansion of the grants to include nonprofit organizations has increased interest and spurred some practical research at the University and provided outdoor classrooms as well. Not only has this program benefited the recipient growers but provided vendors for the ever expanding local farmer markets. In 2010 there were 33 farmer markets including 3 winter markets. In past years it was very difficult for market managers to find Wyoming vendors but it is becoming easier as more small producers increase production through the use of season extension methods. As other producers see the value of high tunnel production through our outreach efforts that include farm days, workshops, news articles, web videos and word of mouth interest in hoop house production continues to grow. We continue maintain contact with past grant recipients in order to assess the long term impacts of the small grant program. The 2013 farmers' market conference will have two producers and one nonprofit speaker who have received a small grant through the program.



LESSONS LEARNED

With each new hoop house constructed we are always cognoscente of the need to build for wind and continue to advise grant recipients of this need. We also warn them of overenthusiastic sales representatives of hoop house kits manufacturers who do not understand the importance of this in Wyoming. As more and more high tunnels are being built of various designs we are able to see what works best for Wyoming's weather. We also had two grant applications approved for a children's learning center nonprofit that were not constructed so the money had to be reallocated. The manager of this nonprofit left and there was no follow through by the new manager. There is often a high staff turnover rate with smaller nonprofits. We continue to do follow up to see if all the projected future activities in the grant recipients report have occurred. With each grant be it producer or nonprofit we look

for a continuing impact beyond the grant period.

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DEPART OF AGRICULTURE SPECIALTY CROP TECHNICAL ASSISTANCE POSITION

PROJECT SUMMERY

The development of produce and horticulture products continues to be a vital goal of the Wyoming agricultural economy. Wyoming ranks 44 among all states in crop production and 38th for all agricultural production. In 2008, the farm gate value of crops for Wyoming totaled 273 million dollars. As traditional commodity producers look to specialty crops to increase their bottom line, this position provided much needed assistance. As a goal the WDA is committed to increase the availability of specialty crops within Wyoming. A Specialty Crop Technical Assistance position was developed to assist in this goal. Funding from this grant allowed for expanded promotion and education of specialty crop opportunities in Wyoming. An intern was hired to help the program in area's related to food safety, research, project assistance and marketing. Additional money was allocated to promote specialty crops issues at targeted agricultural conferences/events within the state. This position also coordinated with other state agencies, the University of Wyoming, Community Colleges, and producer groups to expand specialty crop production in Wyoming.

PROJECT APPROACH

Technical Assistance Position From October 1 2009 through Sept 30, 2010 this position will work other agencies and organizations to help develop the specialty crops industry in Wyoming. The position will provide information, promotional assistance and technical assistance to individual growers, producer groups, and educators throughout the duration of the grant. In addition the Specialty Crop Technical Assistance position will help monitor Specialty Crop grants through site audits, oversight of the intern's activities, develop specialty crop promotional materials, coordinate the efforts to increase the number of specialty crop grant proposals and work on statewide specialty crop marketing efforts.

Intern This position will allow for expanded efforts of the Specialty Crop Program by providing targeted program support. From Oct 1, 2009 through Sept 30 2010 the intern will assist the

Specialty Crop Coordinator with issues related to food safety, education, project assistance and marketing.

Specialty Crop Conference Assistance (October 2009-September 30, 2011) We provide assistance for two specialty crop events/conferences. Support will be targeted to; education, season extension, research, food safety and product marketing/promotion.

GOALS AND OUTCOMES

Goal: To develop education for, and promotion of the specialty crop industry in Wyoming through a Technical Assistance Position.

Outcome: The contract employee was hired in February of 2009 to manage and promote the Specialty Crop Program. The following were efforts undertaken by the contractor in order to expand specialty crops in Wyoming.

This position worked with other agencies and organizations to help develop the specialty crops industry in Wyoming.

Partnerships with the following organizations were maintained for expansion of Specialty Crops in Wyoming: the Wyoming Rural Development Council, the Wyoming Business Council, UW Cooperative Extension in Torrington, Casper, Sheridan and Laramie, Rocky Mountain Farmers Union, Main Street Program in Rock Springs, Pushroot Community Gardens in Lander,

Wyoming Bee Keepers Association, Sheridan College, Wyoming State Fair, UW Master Gardeners Program, Wyoming Farmers Marketing Association, Heart Mountain Center in Powell, UW Sustainable Agriculture Research and Extension Center Torrington, University of New Mexico Cooperative Extension, High Tunnel Program, Powell Seed Lab, Powell Research Station, Wyoming Growers and Grounds Keepers Association, Wyoming Lodging and Restaurant Association, Wyoming Grape Growers Association, Goshen County Fair, UWYO Sustainable Agriculture Research and Extension Center, NRCS, USDA Rural Development and NASS.



1. Through the outreach activities of the Specialty Crop Technical position the number of Specialty Crop Grant proposals increased by 4 to 14.
2. An increase in the number of producers/production as a result of this position's efforts was reflected in the increase of three farmers markets and reports by farmers markets that on average almost 50% of the vendors were selling specialty crop products.
3. The Specialty Crop Conference Assistance program will provide assistance to at least two conferences /events. The number of attendees will be tracked and reported. Marketing of the Specialty Crop Program was done at the following events. The 2010 Wyoming Farmers Market Conference, Albin Farm Days, UWYO Sustainability Conference, the Beekeepers Winter

Meeting, the Agrifuture Conference, the Small Farm Conference, the State Master Gardener Conference and the Consumer Issues Conference. These conferences and events impacted 400 producers and consumers.

4. The number of hits to the WDA specialty crop web page for 2010 averaged just over 470 per month.

The position provided a leadership for the following activities.

1. Two high tunnel workshops were organized one in Gillette at the Community Garden and one in Douglas at the State to provide information on construction techniques and season extension advantages. (24 producers, master gardeners and agricultural professionals)
2. Two high tunnel manuals were developed and printed. (Distributed over 250 at conferences and workshops)
3. A Seed Saving Manual was formatted, published and distributed to the 23 county extension offices
4. The Specialty Crop Grant application process was updated and we received 14 applications
5. The grant application forms were developed for Non Profit high Tunnel Grants and we received 22 applications in 2009-10
6. The Grant Application forms for the Scholarship program was developed and advertized (Impact 68)
7. Brochures for the Producer Season Extension Grants, the Non Profit High Tunnel Grants and the Scholarship Grants were developed, printed and distributed at all conferences and workshops.
8. As an advisor to the Wyoming Farmers Market Association, the position provided technical and marketing support on specialty crop topics presented at the annual 2010 WFMA convention that impacted 50 market managers and vendors.
9. Efforts to promote specialty crops to consumers in Wyoming included speaking engagements. Seminars were given at Gillette Sustainability Speaker Series, the UWYO Consumer Issues Conference, the Laramie Master Gardeners Annual meeting, the Wyoming Farmers Market Association Conference, Impacted approximately 165 people)
10. A specialty crop display was developed for the Wyoming State Fair (fair attendance in 2009 was 45,040) to increase awareness of locally grown specialty crops.
11. In order to increase applications to the specialty crop program, the online specialty crop application manual was updated and the data base of 350 economic development professionals, agricultural specialists and producers was updated for marketing the specialty crop program.
12. Through the outreach activities of the Specialty Crop Technical position the number of SCPG proposals increased to 14.
13. Technical support was provided at three other high tunnel builds, one in Powell and two in Torrington. (Impact 42 people)
14. Specialty Crop audits were conducted in Rock Springs, Lander, Powell, Pinedale, Casper, Douglas, two in Torrington, Wheatland, Lingle and two in Laramie.



16. Two out of State events were attended to increase the knowledge of the specialty crop program coordinator. These included the Farm to School Conference in Utah and a high tunnel workshop in New Mexico.

Specialty Crop Conference Assistance The Specialty Crop coordinator provided assistance to the 2009 and 2010 Wyoming Farmers Market Conference, (Impact 122 producers and market managers) Support has been targeted to; education, season extension, research, food safety and product marketing/promotion. In December speaker assistance was provided for the 2010 Wyoming Bee keepers Winter Meeting (Impacted only 11 attendees as snow storm caused low turnout)

Intern: An intern was hired in September of 2010. This position has allowed for expanded efforts of the Specialty Crop Program by providing targeted program support. The intern has assisted the Specialty Crop coordinator with market research, publication formatting and development, press releases and to help complete the hoop house at the WSF grounds.



Goal: Promote and expand the Wyoming Specialty Crop Program through the hiring of an intern to assist Program Coordinator

Outcome: An intern was hired in 2010. This position has allowed for expanded efforts of the Specialty Crop Program by providing targeted program support. The intern has assisted the Specialty Crop coordinator with market research, publication formatting and development, press releases and to help construct a hoop house at the WSF grounds. (See Attachments) The intern left due to heavy school load and was replaced with a second intern in January of 2012.

The second intern preformed a variety of activities that included:

- *Revision of the Wyoming Organic Association Website Review of submitted specialty crop block grants.
- *Creation of a Wyoming Commodities Map by county
- *Farm to School: How to Resource Guide Aided in the building of several hoop houses
- *Helped plant apple trees at the State Fair
- *Attended workshops and conferences for additional learning and as a representative of the Department.
- *Compiled a listing of County Assessments and separated them by county



*Attended the 2012 Farmers Market Manager Certification

In addition to the specific tasks list above, the intern was instrumental in contacting schools and producers to gauge their interest in specialty crops and hoop house development. She worked with Survey Monkey to input her data for a cumulative summary of interest. The intern was also involved in various office duties and assigned tasks as needed.

BENEFICIARIES

Through the efforts of the technical assistance position the number of Specialty Crop proposals to increase by 40%. 4% of new existing specialty crop producers or processors that expanded were impacted by the hoop house small grant program. 10% (50,000) of the population in the state of Wyoming was impacted through education and marketing efforts that included the Wyoming State Fair, hoop house workshops, seminars and the website.

LEASONS LEARNED

The expansion of small acreage production continues in all areas of the State. Many areas in Wyoming require season extension techniques in order to successfully grow specialty crops. At the same time consumers are looking for more local grown products.

The position continues to work to expand the specialty crop industry in Wyoming by developing educational, marketing and opportunities. There continues to be a steep learning curve for many producers in the more weather challenged counties. Some

segments within the specialty crop industry in Wyoming like the fruit and vegetable growers require much more in the way of research, education and marketing. The position continues to take a hand on approach with some projects in order to ensure successful outcomes. The reason for this is Wyoming Specialty Crop program is funding several volunteer groups that require additional support and information in order to accomplish their goals.



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WYOMING SPECIALTY CROP VIDEO ENABLED WEBSITE

PROJECT SUMMARY

The Wyoming Department of Agriculture continues to develop programs to promote specialty crop producers in the State of Wyoming, as well as educate the general public on the importance of locally-grown food. The WDA created a new, video-enabled Web site, which features a video-based component. Through the use of a contractor the WDA developed webisodes related to the specialty crop industry. The WDA will then embed these webisodes into the WDA web site to promote locally grown specialty crops to consumers and provide educational video for producers. The subject matter of the educational webisodes would include the importance of locally-grown specialty crops as well as the impact specialty crop farmers have on the economy of an area and state. To increase participation by producers in Wyoming Department of Agriculture specialty crop programs educational training webisodes were created. The WDA, with the help of a contractor, produced and edited four 3-5 minute videos; two of successful specialty crop producers, one longer video for producer instructional purposes, and one on the growing opportunities to market specialty crops through farmers markets.

PROJECT APPROACH

Through the use of a contractor the WDA created webisodes with the stated goal of raising the awareness of specialty crops in Wyoming. Webisodes were geared toward the consumers on the importance of locally-grown specialty crops as related to food safety and their impact on the economy of a community and the state. This resulted in more exposure for the Wyoming specialty industry to consumers. The second goal was to increase participation by producers in Wyoming Department of Agriculture specialty crop programs through training webisodes. Under the direction of The Wyoming Department of Agriculture a contractor was hired to film video on two Webisodes that were geared toward the consumer. A third video showcased the farmers markets around the state as related to specialty crops and producers. A training video was produced to help producers develop increased production, season extension and quality of products. These videos were uploaded to the WDA website, vimeo.com, face book, and youtube.com.

GOALS AND OUTCOMES ACHIEVED

Goal: Through specialty crop videos promote locally grown specialty crops to consumers and educate the general public on the importance of this locally-grown food.

Outcome: Two videos were created and imbedded into the new video enabled website. The number of hits to the website that relate to all aspects of specialty crops continue to be monitored.

Goal: To increase participation by producers in Wyoming Department of Agriculture specialty crop programs by providing educational videos. The subject matter of the educational webisodes would include the importance of locally-grown specialty crops as well as the impact specialty crop farmers have on the economy of an area.

Outcome: Two videos were created and imbedded into the new video enabled website. The number and duration of the site visits to training webisodes continue to be counted allowing us to measure our level of success at reaching producers or potential producers.

Impact: To date there have been a total of 15,237 hits. The Acres project video has received over 1000 hits in the last two months since it was posted.

These webisodes can be seen on the Wyoming Department of Agriculture's web site, <http://wyagric.state.wy.us/>, Facebook and on YouTube.

Additional videos stimulated by the specialty crop program but not funded though us were produced by the University of Wyoming on hoop house construction. They can be viewed at

<http://www.wyomingextension.org/whhin/>,

<http://www.youtube.com/watch?v=QWZjQ9hQFck>

http://www.youtube.com/watch?v=WZ_ag5sc2zo



BENEFICIARIES

A new video-enabled website allowed the WDA to imbed the webisodes into our site. The short videos showcased production methods and producers who sell in into the local market.

Two of the video shorts were geared toward the consumers in order to highlight the importance of locally-grown specialty crops and local farmers markets. Two educational videos were geared to specialty crop producers. These videos have positively benefited new and existing producers by providing increased knowledge for them as well as consumers in Wyoming on local food production and marketing. Consumers are increasingly seeking healthy, locally produced foods. This trend has grown as food safety issues emerge and as a larger segment of the population has taken a greater interest in the origin of their food. It is estimated that specialty crop sales at the farmers markets in Wyoming generated over a half million dollars in 2012. The webisodes hits constitute about 3% of Wyoming consumers. Due to the specialty crop program an additional three videos were produced by the University of

Wyoming to highlight some of the work that Coop Extension has been doing on season extension techniques. Approximately 500 individuals have viewed the combined videos.

LESSONS LEARNED

The WDA initially planned on 5 videos but reduced the number to 4 due to budget limitations. The videos took longer than anticipated to complete because of staff changes at Thatswy.com. We also had some issues with editing in that not all producers are good at public speaking and staying on the appropriate topic. The videos are also useful at trade events or workshops when used as part of a seminar or display. Overlap from various projects is beginning to show up in the program. The University of Wyoming produced an additional 3 videos that have been valuable for promotion of hoop houses as a means for season extension in Wyoming. Two of the videos were filmed during hoop house workshops sponsored by the Specialty Crop program. The third was filmed in a hoop house sponsored through the Specialty Crop Small Grant program. Although we have over 15,000 hits the number of full views has been approximately 500. Web surfers have a short attention so the length of the videos may have been too long for full viewing.

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The following attachments are related to various project development, management or outcomes.